

SEQUENCE LISTING


<110> Hartley, James L.
Brasch, Michael A.
Temple, Gary F.
Cheo, David

<120> Compositions and Methods for Use in Recombinational
Cloning of Nucleic Acids

<130> 0942.4680003

<140> 09/517,466

<141> 2000-03-02

 <150> US 60/122,389

<151> 1999-03-02

<150> US 60/126,049

<151> 1999-03-23

<150> US 60/136,744

<151> 1999-05-28

<160> 285

<170> PatentIn version 3.1

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cagtattatg tagtctgttt tttatgcaaa atctaattta atatattgat atttatatca 120
ttttacgttt ctcgttcagc tttttgtac aaagttggca ttataaaaaa gcattgctca 180
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tgctttctta taatgccaac tttgtacaag aaagctgaac gagaaacgta aaatgatata 120
aatatcaata tattaaatta gattttgcat aaaaaacaga ctacataata ctgtaaaaca 180
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acaagtttgt acaaaaaagc tgaacgagaa acgtaaaatg atataaatat caatatatta 60
aattagatgt tgcataaaaa acagactaca taatactgta aaacacaaca tatccagtca 120
ctatg 125

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gcaggtcgac catagtgact ggatatgttg tgttttacag tattatgtag tctgtttttt 60
atgcaaaaatc taatttaata tattgatatt tatatcattt tacgtttctc gttcagcttt 120
cttgtacaaa gtggt 135

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<400> 15

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<211> 24

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<400> 16
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24

<210> 17

<211> 23

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<221> misc_feature

<222> (23)..(23)

<223> n at the 3' end of the primer represents a target-specific
sequence of any length

<400> 17
cagcttttctt gtacaaagtg gtn

23

<210> 18

<211> 22

<212> DNA

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<221> misc_feature

<222> (22)..(22)

<223> n at the 3' end of the primer represents a target-specific sequence of any length

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22

<210> 19

<211> 26

<212> DNA

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<223> attB1- and attB2-derived Oligonucleotide Primer

<220>

<221> misc_feature

<222> (26)..(26)

<223> n at the 3' end of the primer represents a target-specific sequence of any length

<400> 19
acaagtttgt acaaaaaagc aggctn

26

<210> 20

<211> 26

<212> DNA

<213> Artificial Sequence

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<221> misc_feature

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accactttgt acaagaaagc tgggtn

26

<210> 21

<211> 19

<212> DNA

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<221> misc_feature

<222> (19)..(19)

<223> n at the 3' end of the primer represents a target-specific
sequence of any length

<400> 21
tgtacaaaaa agcaggctn

19

<210> 22

<211> 19

<212> DNA

<213> Artificial Sequence

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<221> misc_feature

<222> (19)..(19)

<223> n at the 3' end of the primer represents a target-specific
sequence of any length

<400> 22
tgtacaagaa agctgggtn

19

<210> 23

<211> 16

<212> DNA

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<221> misc_feature

<222> (16)..(16)

<223> n at the 3' end of the primer represents a target-specific
sequence of any length

<400> 23
acaaaaaagc aggctn

16

<210> 24

<211> 16

<212> DNA

<213> Artificial Sequence

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<221> misc_feature

<222> (16)..(16)

<223> n at the 3' end of the primer represents a target-specific
sequence of any length

<400> 24
acaagaaagc tgggtn

16

<210> 25

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<221> misc_feature

<222> (13)..(13)

<223> n at the 3' end of the primer represents a target-specific
sequence of any length

<400> 25
aaaaagcagg ctn

13

<210> 26

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<221> misc_feature

<222> (13)..(13)

<223> n at the 3' end of the primer represents a target-specific
sequence of any length

<400> 26
agaaagctgg gtn

13

<210> 27

<211> 12

<212> DNA

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<223> attB1- and attB2-derived Oligonucleotide Primer

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<221> misc_feature

<222> (12)..(12)

<223> n at the 3' end of the primer represents a target-specific
sequence of any length

<400> 27
aaaagcaggc tn

12

<210> 28

<211> 12

<212> DNA

<213> Artificial Sequence

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<223> attB1- and attB2-derived Oligonucleotide Primer

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<221> misc_feature

<222> (12)..(12)

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sequence of any length

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gaaagctggg tn

12

<210> 29

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<212> DNA

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<222> (11)..(11)

<223> n at the 3' end of the primer represents a target-specific
sequence of any length

<400> 29
aaagcaggct n

11

<210> 30

<211> 11

<212> DNA

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<221> misc_feature

<222> (11)..(11)

<223> n at the 3' end of the primer represents a target-specific
sequence of any length

<400> 30
aaagctgggt n

11

<210> 31

<211> 29

<212> DNA

<213> Artificial Sequence

<220>

<223> attB1 Oligonucleotide Primer

<400> 31
ggggacaagt ttgtacaaaa aagcaggct

29

<210> 32

<211> 29

<212> DNA

<213> Artificial Sequence

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<223> attB2 Oligonucleotide Primer

<400> 32

ggggaccact ttgtacaaga aagctgggt

29

<210> 33

<211> 27

<212> DNA

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<223> XhoI Insertion Primer

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<221> misc_feature

<222> (4)..(12)

<223> May be any nucleotide

<220>

<221> misc_feature

<222> (22)..(27)

<223> May be any nucleotide

<400> 33

atgnnnnnnn nntaactcga gnnnnnnn

27

<210> 34

<211> 30

<212> PRT

<213> Artificial Sequence

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<223> attB1 fused into a His6 fusion vector

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Lys	Lys	Ala	Gly	Phe	Glu	Asn	Leu	Tyr	Phe	Gln	Gly	Thr	Met
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<211> 11

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<223> attB Amino Acid Sequence

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<210> 36

<211> 48

<212> DNA

<213> Artificial Sequence

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<223> attL1 PCR Primer

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48

<210> 37

<211> 48

<212> DNA

<213> Artificial Sequence

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<223> attL2 PCR Primer

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48

<210> 38

<211> 22

<212> DNA

<213> Artificial Sequence

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<223> attL Right PCR Primer

<400> 38
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22

<210> 39

<211> 43

<212> DNA

<213> Artificial Sequence

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<223> attR1 PCR Primer

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43

<210> 40

<211> 43

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<223> attR2

<400> 40
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<210> 41
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<400> 41
cagacggcat gatgaacctg aa 22

<210> 42
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<223> B1-Hgb oligonucleotide

<400> 42
ggggacaagt ttgtacaaaa aagcaggct 29

<210> 43
<211> 28
<212> DNA
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<223> B2-Hgb oligonucleotide

<400> 43
ggggaccact ttgtacaaga aagctggg 28

<210> 44
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<212> DNA

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<223> 18B1-Hgb oligonucleotide

<400> 44

tgtacaaaaa agcaggct

18

<210> 45

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> 18B2-Hgb oligonucleotide

<400> 45

tgtacaagaa agctgggt

18

<210> 46

<211> 15

<212> DNA

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<220>

<223> 15B1-Hgb oligonucleotide

<400> 46

acaaaaaagc aggct

15

<210> 47

<211> 15

<212> DNA

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<223> 15B2-Hgb oligonucleotide

<400> 47
acaagaaagc tgggt

15

<210> 48

<211> 12

<212> DNA

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<223> 12B1-Hgb oligonucleotide

<400> 48
aaaaagcagg ct

12

<210> 49

<211> 12

<212> DNA

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<223> 12B2-Hgb oligonucleotide

<400> 49
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12

<210> 50

<211> 11

<212> DNA

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<223> 11B1-Hgb oligonucleotide

<400> 50
aaaagcaggc t

11

<210> 51

<211> 11

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<223> 11B2-Hgb oligonucleotide

<400> 51
gaaagctggg t

11

<210> 52

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<223> 10B1-Hgb oligonucleotide

<400> 52
aaagcaggct

10

<210> 53

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<212> DNA

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<223> 10B2-Hgb oligonucleotide

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<210> 54

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<223> attB1 adapter

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<210> 55

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<223> attB2 adapter

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ggggaccact ttgtacaaga aagctgggt

29

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<223> -5' -Hgb oligonucleotide

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22

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<223> -3' -Hgb oligonucleotide

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<210> 58

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<223> 15 bp Core Region of attB, attP, attL and attR

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gcttttttat actaa

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<223> attL0 PCR Primer

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<210> 60

<211> 48

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<223> attLT1A PCR Primer

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48

<210> 61

<211> 48

<212> DNA

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<223> attLT1C PCR Primer

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<210> 62

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<210> 63

<211> 48

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<223> attLT2A PCR Primer

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ggggagcctg cttttatata ctaagttggc attataaaaa agcattgc

48

<210> 64

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48

<210> 65

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<223> attLT2G PCR Primer

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48

<210> 66

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<223> attLT3A PCR Primer

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48

<210> 67

<211> 48

<212> DNA

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<210> 68

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48

<210> 70

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<210> 72

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<212> DNA

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<223> attLT5C PCR Primer

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<210> 74

<211> 48

<212> DNA

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<223> attLT5G PCR Primer

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<210> 75

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<212> DNA

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<223> attLA6C PCR Primer

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<210> 76

<211> 48

<212> DNA

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<223> attLA6G PCR Primer

<400> 76

ggggagcctg cttttttatg ctaagttggc attataaaaa agcattgc

48

<210> 77

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> attLA6T PCR Primer

<400> 77

ggggagcctg cttttttatt ctaagttggc attataaaaa agcattgc

48

<210> 78

<211> 48

<212> DNA

<213> Artificial Sequence

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<223> attLC7A PCR Primer

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ggggagcctg cttttttata ataagttggc attataaaaa agcattgc

48

<210> 79

<211> 48

<212> DNA

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<223> attLC7G PCR Primer

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48

<210> 80

<211> 48

<212> DNA

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<223> attLC7T PCR Primer

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48

<210> 81

<211> 48

<212> DNA

<213> Artificial Sequence

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<223> attL8

<400> 81

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48

<210> 82

<211> 48

<212> DNA

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<223> attL9

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<210> 83

<211> 48

<212> DNA

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<223> attL10

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<211> 48

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<223> attL14

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<223> attL0

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<223> attL5

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<210> 88

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<212> DNA

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<223> attL6

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<210> 89

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<223> attL13

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30

<210> 90

<211> 30

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<223> attL14

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30

<210> 91

<211> 30

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<223> attL15

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agcctgcttt tttatactag gttggcatta

30

<210> 92

<211> 21

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<223> Consensus sequence for integrase core-binding

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<221> misc_feature

<222> (7)..(8)

<223> n is any nucleotide

<220>

<221> misc_feature

<222> (10)..(12)

<223> n is any nucleotide

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<221> misc_feature

<222> (14)..(15)

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21

<210> 93

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tcaagttagt ataaaaaagc aggct

25

<210> 94

<211> 29

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<223> attB1

<400> 94
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<210> 95

<211> 29

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<222> (1794)..(2367)

<223> ori

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<222> (1791) .. (2364)

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<223> May be any nucleotide

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<223> May be any nucleotide

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tacccaactt aatcgccttg cagcacatcc cccttcgcc agctggcgta atagcgaaga	5400

ggcccgccacc gatcgccctt cccaacagtt ggcgagcctg aatggcggaat ggacgcgccc	5460
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acatatatta cgatgctgtc tattaaatgc ttcttatatt atatatatag taatgtcggt	6960
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cgccaacacc cgctgacgcg ccctgacggg cttgtctgct cccggcatcc gcttacagac	7080
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gcgcga	7146

<211> 64

<212> DNA

<213> Artificial Sequence

<220>

<223> pENTR1A multiple cloning site

<220>

<221> CDS

<222> (1)..(63)

<223>

<400> 185
act ttg tac aaa aaa gca ggc ttt aaa gga acc aat tca gtc gac tgg 48
Thr Leu Tyr Lys Lys Ala Gly Phe Lys Gly Thr Asn Ser Val Asp Trp
1 5 10 15
atc cgg tac cga att c 64
Ile Arg Tyr Arg Ile
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<210> 186

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> pENTR1A multiple cloning site

<400> 186

Thr Leu Tyr Lys Lys Ala Gly Phe Lys Gly Thr Asn Ser Val Asp Trp
1 5 10 15
Ile Arg Tyr Arg Ile
20

<210> 187

<211> 49

<212> DNA

<213> Artificial Sequence

<220>

<223> pENTR1A multiple cloning site

<400> 187
gaattcgcg cgcactcga gatattctaga ccagctttc ttgtacaaa

49

<210> 188

<211> 62

<212> DNA

<213> Artificial Sequence

<220>

<223> pENTR2B multiple cloning site

<220>

<221> CDS

<222> (1)..(60)

<223>

<400> 188
ttg tac aaa aaa gca ggc tgg cgc cgg aac caa ttc agt cga ctg gat
Leu Tyr Lys Lys Ala Gly Trp Arg Arg Asn Gln Phe Ser Arg Leu Asp
1 5 10 15

48

ccg gta ccg aat tc
Pro Val Pro Asn
20

62

<210> 189

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> pENTR2B multiple cloning site

<400> 189

Leu Tyr Lys Lys Ala Gly Trp Arg Arg Asn Gln Phe Ser Arg Leu Asp
1 5 10 15

Pro Val Pro Asn
20

<210> 190

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> pENTR2B multiple cloning site

<220>

<221> CDS

<222> (2)..(49)

<223>

<400> 190
g aat tcg cgg ccg cac tcg aga tat cta gac cca gct ttc ttg tac aaa 49
Asn Ser Arg Pro His Ser Arg Tyr Leu Asp Pro Ala Phe Leu Tyr Lys
1 5 10 15
g 50

<210> 191

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> pENTR2B multiple cloning site

<400> 191

Asn Ser Arg Pro His Ser Arg Tyr Leu Asp Pro Ala Phe Leu Tyr Lys
1 5 10 15

<210> 192

<211> 69

<212> DNA

<213> Artificial Sequence

<220>

<223> pENTR3C multiple cloning site

<220>

<221> CDS

<222> (1)..(63)

<223>

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<400> 192
ttg tac aaa aaa gca ggc tct tta aag gaa cca att cag tcg act gga      48
Leu Tyr Lys Lys Ala Gly Ser Leu Lys Glu Pro Ile Gln Ser Thr Gly
1          5          10          15

tcc ggt acc gaa ttc gatcgc      69
Ser Gly Thr Glu Phe
          20
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<210> 193

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> pENTR3C multiple cloning site

<400> 193

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Leu Tyr Lys Lys Ala Gly Ser Leu Lys Glu Pro Ile Gln Ser Thr Gly
1          5          10          15

Ser Gly Thr Glu Phe
          20
```

<210> 194

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> pENTR3C multiple cloning site

<220>

<221> CDS

<222> (2)..(49)

<223>

<400> 194
g aat tcg cgg ccg cac tcg aga tat cta gac cca gct ttc ttg tac aaa 49
Asn Ser Arg Pro His Ser Arg Tyr Leu Asp Pro Ala Phe Leu Tyr Lys
1 5 10 15
g 50

<210> 195

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> pENTR3C multiple cloning site

<400> 195

Asn Ser Arg Pro His Ser Arg Tyr Leu Asp Pro Ala Phe Leu Tyr Lys
1 5 10 15

<210> 196

<211> 64

<212> DNA

<213> Artificial Sequence

<220>

<223> pENTR4 multiple cloning site

<220>

<221> CDS

<222> (1)..(63)

<223>

<400> 196

ttg	tac	aaa	aaa	gca	ggc	tcc	acc	atg	gga	acc	aat	tca	gtc	gac	tgg	48
Leu	Tyr	Lys	Lys	Ala	Gly	Ser	Thr	Met	Gly	Thr	Asn	Ser	Val	Asp	Trp	
1				5					10					15		

atc	cgg	tac	cga	att	c	64
Ile	Arg	Tyr	Arg	Ile		
			20			

<210> 197

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> pENTR4 multiple cloning site

<400> 197

Leu	Tyr	Lys	Lys	Ala	Gly	Ser	Thr	Met	Gly	Thr	Asn	Ser	Val	Asp	Trp
1				5					10					15	

Ile	Arg	Tyr	Arg	Ile
			20	

<210> 198

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> pENTR4 multiple cloning site

<220>

<221> CDS

<222> (2)..(49)

<223>

<400> 198

g aat tcg cgg ccg cac tcg aga tat cta gac cca gct ttc ttg tac aaa 49
Asn Ser Arg Pro His Ser Arg Tyr Leu Asp Pro Ala Phe Leu Tyr Lys
1 5 10 15

q 50

<210> 199

<211> 16

<212> PRT

<213> Artificial Sequence

 $\langle 220 \rangle$

<223> pENTR4 multiple cloning site

<400> 199

Asn Ser Arg Pro His Ser Arg Tyr Leu Asp Pro Ala Phe Leu Tyr Lys
1 5 10 15

$\langle 210 \rangle$ 200

<211> 66

<212> DNA

<213> Artificial Sequence

<220>

<223> pENTR5 multiple cloning site

 $\langle 220 \rangle$

<221> CDS

<222> (1) .. (63)

<223>

<400> 200

ttg tac aaa aaa gca ggc ttt cat atg gga acc aat tca gtc gac tgg 48
Leu Tyr Lys Lys Ala Gly Phe His Met Gly Thr Asn Ser Val Asp Trp
1 5 10 15

atc cgg tac cga att cgc 66

Ile Arg Tyr Arg Ile
20

<210> 201

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> pENTR5 multiple cloning site

<400> 201

Leu Tyr Lys Lys Ala Gly Phe His Met Gly Thr Asn Ser Val Asp Trp
1 5 10 15

Ile Arg Tyr Arg Ile
20

<210> 202

<211> 51

<212> DNA

<213> Artificial Sequence

<220>

<223> pENTR5 multiple cloning site

<400> 202
agaattcgcg gccgcactcg agatatctag acccagcttt cttgtacaaa g

51

<210> 203

<211> 63

<212> DNA

<213> Artificial Sequence

<220>

<223> pENTR6 multiple cloning site

<220>

<221> CDS

<222> (1)..(60)

<223>

<400> 203

ttg	tac	aaa	aaa	gca	ggc	tgc	atg	cga	acc	aat	tca	gtc	gac	tgg	atc	48
Leu	Tyr	Lys	Lys	Ala	Gly	Cys	Met	Arg	Thr	Asn	Ser	Val	Asp	Trp	Ile	
1				5				10						15		

cgg	tac	cga	att	cgc												63
Arg	Tyr	Arg	Ile													
			20													

<210> 204

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> pENTR6 multiple cloning site

<400> 204

Leu	Tyr	Lys	Lys	Ala	Gly	Cys	Met	Arg	Thr	Asn	Ser	Val	Asp	Trp	Ile	
1				5				10						15		

Arg	Tyr	Arg	Ile													
			20													

<210> 205

<211> 51

<212> DNA

<213> Artificial Sequence

<220>

<223> pENTR6 multiple cloning site

<400>	205																51
aga	att	cgc	g	gcc	gca	ctc	g	aga	tat	ct	tag	acc	cag	ctt	t	tac	aaa g

<210> 206

<211> 84

<212> DNA

<213> Artificial Sequence

<220>

<223> pENTR7 multiple cloning site

<220>

<221> CDS

<222> (1)..(81)

<223>

<400> 206
ttg tac aaa aaa gca ggc ttt gaa aac ctg tat ttt caa gga acc gtt 48
Leu Tyr Lys Lys Ala Gly Phe Glu Asn Leu Tyr Phe Gln Gly Thr Val
1 5 10 15
tca tgc atc gtc gac tgg atc cgg tac cga att cgc 84
Ser Cys Ile Val Asp Trp Ile Arg Tyr Arg Ile
20 25

<210> 207

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> pENTR7 multiple cloning site

<400> 207

Leu Tyr Lys Lys Ala Gly Phe Glu Asn Leu Tyr Phe Gln Gly Thr Val
1 5 10 15
Ser Cys Ile Val Asp Trp Ile Arg Tyr Arg Ile
20 25

<210> 208

<211> 51

<212> DNA

<213> Artificial Sequence

<220>

<223> pENTR7 multiple cloning site

<400> 208

agaattcgcg gccgcactcg agatatctag acccagcttt cttgtacaaa g

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<210> 209

<211> 81

<212> DNA

<213> Artificial Sequence

<220>

<223> pENTR8 multiple cloning site

<220>

<221> CDS

<222> (1)..(78)

<223>

<400> 209

ttg tac aaa aaa gca ggc ttt gaa aac ctg tat ttt caa gga acc atg
Leu Tyr Lys Lys Ala Gly Phe Glu Asn Leu Tyr Phe Gln Gly Thr Met
1 5 10 15

48

gac cta gtc gac tgg atc cgg tac cga att cgc
Asp Leu Val Asp Trp Ile Arg Tyr Arg Ile
20 25

81

<210> 210

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> pENTR8 multiple cloning site

<400> 210

Leu Tyr Lys Lys Ala Gly Phe Glu Asn Leu Tyr Phe Gln Gly Thr Met
1 5 10 15

Asp Leu Val Asp Trp Ile Arg Tyr Arg Ile
20 25

<210> 211

<211> 51

<212> DNA

<213> Artificial Sequence

<220>

<223> pENTR8 multiple cloning site

<400> 211
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<210> 212

<211> 81

<212> DNA

<213> Artificial Sequence

<220>

<223> pENTR9 multiple cloning site

<220>

<221> CDS

<222> (1)..(78)

<223>

<400> 212
ttg tac aaa aaa gca ggc ttt gaa aac ctg tat ttt caa gga cat atg 48
Leu Tyr Lys Lys Ala Gly Phe Glu Asn Leu Tyr Phe Gln Gly His Met
1 5 10 15

aga tct gtc gac tgg atc cgg tac cga att cgc 81
Arg Ser Val Asp Trp Ile Arg Tyr Arg Ile
20 25

<210> 213

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> pENTR9 multiple cloning site

<400> 213

Leu	Tyr	Lys	Lys	Ala	Gly	Phe	Glu	Asn	Leu	Tyr	Phe	Gln	Gly	His	Met
1				5					10					15	

Arg	Ser	Val	Asp	Trp	Ile	Arg	Tyr	Arg	Ile
			20					25	

<210> 214

<211> 51

<212> DNA

<213> Artificial Sequence

<220>

<223> pENTR9 multiple cloning site

<400> 214

agaattcgcg gccgcactcg agatatctag acccagcttt cttgtacaaa g

51

<210> 215

<211> 84

<212> DNA

<213> Artificial Sequence

<220>

<223> pENTR10 multiple cloning site

<220>

<221> CDS

<222> (1)..(81)

<223>

<400> 215
ttg tac aaa aaa gca ggc ttc gaa cta agg aaa tac tta cat atg gga 48
Leu Tyr Lys Lys Ala Gly Phe Glu Leu Arg Lys Tyr Leu His Met Gly
1 5 10 15

acc aat tca gtc gac tgg atc cgg tac cga att cgc 84
Thr Asn Ser Val Asp Trp Ile Arg Tyr Arg Ile
20 25

<210> 216

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> pENTR10 multiple cloning site

<400> 216

Leu Tyr Lys Lys Ala Gly Phe Glu Leu Arg Lys Tyr Leu His Met Gly
1 5 10 15

Thr Asn Ser Val Asp Trp Ile Arg Tyr Arg Ile
20 25

<210> 217

<211> 51

<212> DNA

<213> Artificial Sequence

<220>

<223> pENTR10 multiple cloning site

<400> 217
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<210> 218

<211> 88

<212> DNA

<213> Artificial Sequence

<220>

<223> pENTR11 multiple cloning site

<220>

<221> CDS

<222> (1) . . (87)

<223>

<400> 218
 ttg tac aaa aaa gca ggc ttc gaa gga gat aga acc aat tct cta agg 48
 Leu Tyr Lys Lys Ala Gly Phe Glu Gly Asp Arg Thr Asn Ser Leu Arg
 1 5 10 15

aaa tac tta acc atg gtc gac tgg atc cgg tac cga att c 88
Lys Tyr Leu Thr Met Val Asp Trp Ile Arg Tyr Arg Ile
20 25

<210> 219

<211> 29

<212> PRT

<213> Artificial Sequence

 $\langle 220 \rangle$

<223> pENTR11 multiple cloning site

<400> 219

Leu Tyr Lys Lys Ala Gly Phe Glu Gly Asp Arg Thr Asn Ser Leu Arg
1 5 10 15

Lys Tyr Leu Thr Met Val Asp Trp Ile Arg Tyr Arg Ile
20 25

<210> 220

<211> 50

<212> DNA

<213> Artificial Sequence

 $\langle 220 \rangle$

<223> pENTR11 multiple cloning site

<220>

<221> CDS

<222> (2)..(49)

<223>

<400> 220
g aat tcg cgg ccg cac tcg aga tat cta gac cca gct ttc ttg tac aaa 49
Asn Ser Arg Pro His Ser Arg Tyr Leu Asp Pro Ala Phe Leu Tyr Lys
1 5 10 15
g 50

<210> 221

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> pENTR11 multiple cloning site

<400> 221

Asn Ser Arg Pro His Ser Arg Tyr Leu Asp Pro Ala Phe Leu Tyr Lys
1 5 10 15

<210> 222

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST1

<400> 222
atgagctggt gacaattaat catccggctc gtataatgtg tggaattgtg agcggataac 60
aatttcacac aggaaacaga caggtatagg atcacaagtt tgtacaaaaa agctgaacga 120

<210> 223

<211> 153

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST2

<220>

<221> CDS

<222> (94)..(135)

<223>

<400> 223
aatattctga aatgagctgt tgacaattaa tcatccggtc cgtataatct gtggaattgt 60
gagcggataa caatttcaca caggaaacag acc atg tcg tac tac cat cac cat 114
Met Ser Tyr Tyr His His His
1 5
cac cat cac ggc atc aca agt ttgtacaaaa aagctgaa 153
His His His Gly Ile Thr Ser
10

<210> 224

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> pDEST2

<400> 224

Met Ser Tyr Tyr His His His His His His Gly Ile Thr Ser
1 5 10

<210> 225

<211> 153

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST3

<220>

<221> CDS

<222> (106)..(120)

<223>

<400> 225
cggttctggc aaatattctg aaatgagctg ttgacaatta atcatcggct cgtataatgt 60
gtggaattgt gagcggataa caatttcaca caggaaacag tattc atg tcc cct ata 117
Met Ser Pro Ile
1
cta ggttattgga aaattaaggg ccttggtgcaa ccc 153
Leu
5

<210> 226

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> pDEST3

<400> 226

Met Ser Pro Ile Leu
1 5

<210> 227

<211> 102

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST3

<220>

<221> CDS

<222> (10)..(63)

<223>

<400> 227

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ctggttcg cgt gga tct cgt cgt gca tct gtt gga tcc cca tca aca agt      51
          Arg Gly Ser Arg Arg Ala Ser Val Gly Ser Pro Ser Thr Ser
          1              5              10
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ttg tac aaa aaa gctgaacgag aaacgtaaaa tgatataaat atcaatata      102
Leu Tyr Lys Lys
15
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<210> 228

<211> 18

<212> PRT

<213> Artificial Sequence

<220>

<223> pDEST3

<400> 228

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Arg Gly Ser Arg Arg Ala Ser Val Gly Ser Pro Ser Thr Ser Leu Tyr
1              5              10              15
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Lys Lys

<210> 229

<211> 255

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST4

<220>

<221> CDS

<222> (97)..(246)

<223>

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<400> 229
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tgtgagcggg taacaatttc acacaggaaa cagacc atg ggt cat cat cat cat      114
                               Met Gly His His His His
                               1                               5

cat cac gat tac gat atc cca acg acc gaa aac ctg tat ttt cag ggc      162
His His Asp Tyr Asp Ile Pro Thr Thr Glu Asn Leu Tyr Phe Gln Gly
                               10                               15                               20

gcc cat atg agc gat aaa att att cac ctg act gac gac agt gat gac      210
Ala His Met Ser Asp Lys Ile Ile His Leu Thr Asp Asp Ser Asp Asp
                               25                               30                               35

gat gac aag gta ccc atc aca agt ttg tac aaa aaa gctgaacga      255
Asp Asp Lys Val Pro Ile Thr Ser Leu Tyr Lys Lys
                               40                               45                               50

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<210> 230

<211> 50

<212> PRT

<213> Artificial Sequence

<220>

<223> pDEST4

<400> 230

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Met Gly His His His His His Asp Tyr Asp Ile Pro Thr Thr Glu
1                               5                               10                               15

Asn Leu Tyr Phe Gln Gly Ala His Met Ser Asp Lys Ile Ile His Leu
                               20                               25                               30

Thr Asp Asp Ser Asp Asp Asp Asp Lys Val Pro Ile Thr Ser Leu Tyr
                               35                               40                               45

Lys Lys
50

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<210> 231

<211> 204

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST5

<400> 231
aggcacccca ggcttttacac tttatgcttc cggctcgtat gttgtgtgga attgtgagcg 60
gataacaatt tcacacagga aacagctatg accatgatta cgccaagctc taatacgact 120
cactataggg aaagctggta cgctgcagg taccgggccg gaattcccgg gtcgacgac 180
acaagtttgt acaaaaaagc tgaa 204

<210> 232

<211> 204

<212> DNA

<213> Artificial Sequence

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<223> pDEST5

<400> 232
tttacgtttc tcgttcagct ttcttgatca aagtggatgat cactagtcgg cggccgctct 60
agaggatcca agcttacgta cgcgtgcatg cgacgtcata gctcttctat agtgtcacct 120
aaattcaatt cactggccgt cgtttttacaa cgtcgtgact gggaaaaccc tggcggtacc 180
caacttaatc gccttgacgc acat 204

<210> 233

<211> 204

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST6

<400> 233
taacgccagg gttttcccag tcacgacgtt gtaaaacgac ggccagtgaa ttgaatttag 60
gtgacactat agaagagcta tgacgtcgca tgcacgcgta cgtaagcttg gatcctctag 120
agcggccgcc gactagtgat cacaagtttg tacaaaaaag ctgaacgaga aacgtaaaat 180

gatataaata tcaatatatt aaat

204

<210> 234

<211> 255

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST6

<400> 234
tatttatatc attttacgtt tctcgttcag ctttcttgta caaagtgggtg atcgtcgacc 60
cggggaattcc ggaccgggtac ctgcaggcgt accagctttc cctatagtga gtcgtattag 120
agcttggcgt aatcatgggtc atagctgttt cctgtgtgaa attgttatcc gtcacaaatt 180
ccacacaaca tacgagcccg aagcataaag tgtaaagcct ggggtgccta atgagtgagc 240
taactcacat taatt 255

<210> 235

<211> 306

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST7

<400> 235
ccattgacgc aaatgggagg taggcgtgta cgggtggagg tctatataag cagagctcgt 60
ttagtgaacc gtcagatcgc ctggagacgc catccacgct gttttgacct ccatagaaga 120
caccgggacc gatccagcct ccggactcta gcctaggccg cggagcggat aacaatttca 180
cacaggaaac agctatgacc actaggcttt tgcaaaaagc tatttaggtg aactataga 240
aggtacgcct gcaggtaccg gtccggaatt cccatcacia gtttgtacia aaaagctgaa 300
cgagaa 306

<210> 236

<211> 204

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST8

<400> 236
cgtatactcc ggaatattaa tagatcatgg agataattaa aatgataacc atctcgcaaa 60
taaataagta ttttactggt ttcgtaacag ttttgtaata aaaaaaccta taaatattcc 120
ggattattca taccgtccca ccatcgggcg cggatcatca caagtttgta caaaaaagct 180
gaacgagaaa cgtaaaatga tata 204

<210> 237

<211> 153

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST9

<400> 237
ttggcgaggg acattaaggc gtttaagaaa ttgagaggac ctgttataca cctctacggc 60
ggtcctagat tgggtgcgta atacacagaa ttctgattgg atcccgggtcc gaagcgcgct 120
ttcccatcaa caagtttgta caaaaaagct gaa 153

<210> 238

<211> 204

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST10

<220>

<221> CDS

<222> (109)..(201)

<223>

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<400> 238
aaataagtat ttactgttt tcgtaacagt ttgtataaa aaaaacctat aaatattccg      60
gattattcat accgtcccac catcgggcgc ggatctcggg ccgaaacc atg tcg tac      117
                                   Met Ser Tyr
                                   1
tac cat cac cat cac cat cac gat tac gat atc cca acg acc gaa aac      165
Tyr His His His His His His Asp Tyr Asp Ile Pro Thr Thr Glu Asn
      5                               10                               15
ctg tat ttt cag ggc atc aca agt ttg tac aaa aaa gct      204
Leu Tyr Phe Gln Gly Ile Thr Ser Leu Tyr Lys Lys
20                               25                               30

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<210> 239

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> pDEST10

<400> 239

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Met Ser Tyr Tyr His His His His His His Asp Tyr Asp Ile Pro Thr
1              5              10              15
Thr Glu Asn Leu Tyr Phe Gln Gly Ile Thr Ser Leu Tyr Lys Lys
      20              25              30

```

<210> 240

<211> 204

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST11

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<400> 240
tagtgaaccg tcagatcgcc tggagacgcc atccacgctg ttttgacctc catagaagac      60
accgggaccg atccagcctc cgcgggccccg aattcgagct cggtaccggg ggatcctcta      120
gagtcgaggt cgacgggtatc gataagcttg atatcaacaa gtttgtacaa aaaagctgaa      180

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cgagaaacgt aaaatgatat aaat

204

<210> 241

<211> 255

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST12.2

<400> 241

accgtcagat cgcttgaga cgccatccac gctgttttga cctccataga agacaccggg	60
accgatccag cctccggact ctagcctagg ccgcggagcg gataacaatt tcacacagga	120
aacagctatg accattaggc ctttgcaaaa agctatttag gtgacactat agaaggtagc	180
cctgcaggta ccggtccgga attcccatca acaagtttgt acaaaaaagc tgaacgagaa	240
acgtaaaatg atata	255

<210> 242

<211> 300

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST13

<400> 242

tgggcaaacc aagacagcta aagatctctc acctaccaa caatgcccc ctgcaaaaaa	60
taaattcata taaaaaacat acagataacc atctgcggtg ataaattatc tctggcggtg	120
ttgacataaa taccactggc ggtgatactg agcacatcag caggacgcac tgaccaccat	180
gaagggtgacg ctcttaaaaa ttaagccctg aagaagggca gcattcaaag cagaaggctt	240
tggggtgtgt gatacgaaac gaagcattgg gatcatcaca agtttgtaca aaaaagctga	300

<210> 243

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST14

<400> 243
tgccggccac gatgcgtccg gcgtagagga tcgagatctc gatcccgcga aattaatacg 60
actcactata gggagaccac aacggtttcc ctctagatca caagtttgta caaaaaagct 120

<210> 244

<211> 204

<212> DNA

<213> Artificial Sequence

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<221> misc_feature

<222> (1)..(1)

<223> may be any nucleotide

<220>

<221> CDS

<222> (106)..(120)

<223>

<400> 244
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ccctctagaa ataattttgt ttaactttaa gaaggagata tacat atg tcc cct ata 117
Met Ser Pro Ile
1

cta ggttattgga aaattaaggg cttgtgcaa cccactcgac ttcttttgga 170
Leu
5

atatcttgaa gaaaaatatg aagagcattt gtat 204

<210> 245

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> pDEST15

<220>

<221> misc_feature

<222> (1)..(1)

<223> may be any nucleotide

<400> 245

Met Ser Pro Ile Leu
1 5

<210> 246

<211> 153

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST15

<220>

<221> CDS

<222> (70)..(99)

<223>

<400> 246
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cgtccatgg tcg aat caa aca agt ttg tac aaa aaa gct gaacgagaaa 109
Ser Asn Gln Thr Ser Leu Tyr Lys Lys Ala
1 5 10

cgtaaaatga tataaatatc aatatattaa attagatttt gcat 153

<210> 247

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> pDEST15

<400> 247

Ser	Asn	Gln	Thr	Ser	Leu	Tyr	Lys	Lys	Ala
1				5					10

<210> 248

<211> 153

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST16 multiple cloning site

<220>

<221> CDS

<222> (100)..(111)

<223>

<400>	248	
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agaaataatt	ttgtttaact ttaagaagga gatatacat atg agc gat aaa	111
	Met Ser Asp Lys	
	1	
attattcacc	tgactgacga cagttttgac acggatgtac tc	153

<210> 249

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> pDEST16 multiple cloning site

<400> 249

Met Ser Asp Lys
1

<210> 250

<211> 153

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST16 multiple cloning site

<220>

<221> CDS

<222> (82)..(123)

<223>

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aacctggccg gttctgggttc t ggt gat gac gat gac aag atc aca agt ttg 111
Gly Asp Asp Asp Asp Lys Ile Thr Ser Leu
1 5 10
tac aaa aaa gct gaacgagaaa cgtaaaatga tataaatatc 153
Tyr Lys Lys Ala

<210> 251

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> pDEST16 multiple cloning site

<400> 251

Gly Asp Asp Asp Asp Lys Ile Thr Ser Leu Tyr Lys Lys Ala
1 5 10

<210> 252

<211> 153

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST17 multiple cloning site

<220>

<221> CDS

<222> (94)..(153)

<223>

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aattttgttt aactttaaga aggagatata cat atg tcg tac tac cat cac cat 114
Met Ser Tyr Tyr His His His
1 5
cac cat cac ctc gaa tca aca agt ttg tac aaa aaa gct 153
His His His Leu Glu Ser Thr Ser Leu Tyr Lys Lys Ala
10 15 20

<210> 253

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> pDEST17 multiple cloning site

<400> 253

Met Ser Tyr Tyr His His His His His His Leu Glu Ser Thr Ser Leu
1 5 10 15

Tyr Lys Lys Ala
20

<210> 254

<211> 420

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST18 p10 Promoter

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tcctcggttt tctggaaggc gagcatcggt tgttcgcccc ggactctagc tatagttcta 120
gtggttggct acgtatcgag caagaaaata aaacgccaaa cgcgttgag tcttgtgtgc 180
tatttttaca aagattcaga aatacgcac acttacaaca aggggggacta tgaaattatg 240
cattttgagg atgccgggac ctttaattca acccaacaca atatattata gttaaataag 300
aattatttat caaatcattt gtatattaat taaaatacta tactgtaaat tacattttat 360
ttacaatgag gatcatcaca agtttgtaca aaaaagctga acgagaaacg taaaatgata 420

<210> 255

<211> 300

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST19 39K Promoter

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aaaaaaccgg ccagtttctt ccacaaactc gcgcacggct gtctcgtaaa cttttgcgtc 120
gcaacaatcg cgatgacctc gtggtatgga aattttttct aaaaaagtgt cgttcatgtc 180
ggcggcgcg ttcgcgctcc ggtacgcgcg acgggcacac agcaggacag ccttgtccgg 240
ctcgattatc ataaacaatc ctgcaggcat gcaagctgga tcatcacaag tttgtacaaa 300

<210> 256

<211> 204

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST20 Polyhedron Promoter

<220>

<221> CDS

<222> (163)..(174)

<223>

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gcaaataaat aagtatttta ctgttttcgt aacagttttg taataaaaaa acctataaat      120
attccggatt attcataccg tcccaccatc gggcgcggat cc atg gcc cct ata      174
                                         Met Ala Pro Ile
                                         1
ctaggttatt ggaaaattaa gggccttg      204
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<210> 257

<211> 4

<212> PRT

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<223> pDEST20 Polyhedron Promoter

<400> 257

Met Ala Pro Ile
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<210> 258

<211> 95

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST20 Polyhedron Promoter

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<221> CDS

<222> (1)..(48)

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<400> 258
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Ser Asp Leu Val Pro Arg His Asn Gln Thr Ser Leu Tyr Lys Lys Ala
1 5 10 15
gaacgagaaa cgtaaaatga tataaatatc aatatattaa attagat 95

<210> 259

<211> 16

<212> PRT

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<220>

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<400> 259

Ser Asp Leu Val Pro Arg His Asn Gln Thr Ser Leu Tyr Lys Lys Ala
1 5 10 15

<210> 260

<211> 204

<212> DNA

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<221> CDS

<222> (163)..(180)

<223>

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attgttctcg ttccctttct tccttgtttc tttttctgca caatatttca agctatacca 120
agcatacaat caactccaag cttgaagcaa gcctcctgaa ag atg aag cta ctg 174
Met Lys Leu Leu
1
tct tct atcgaacaag catgcatat ttgc 204
Ser Ser
5

<210> 261
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<220>
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Met Lys Leu Leu Ser Ser
1 5

<210> 262
<211> 102
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<213> Artificial Sequence

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<221> CDS
<222> (37)..(78)
<223>

<400> 262
gaagagagta gtaacaaagg tcaaagacag ttgact gta tcg tcg agg tcg aat 54
Val Ser Ser Arg Ser Asn

1

5

caa aca agt ttg tac aaa aaa gct gaacgagaaa cgtaaaatga tata
Gln Thr Ser Leu Tyr Lys Lys Ala
10

102

<210> 263

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

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<400> 263

Val Ser Ser Arg Ser Asn Gln Thr Ser Leu Tyr Lys Lys Ala
1 5 10

<210> 264

<211> 255

<212> DNA

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<220>

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<222> (217)..(228)

<223>

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aaataaaaaa agtttgccgc tttgctatca agtataaata gacctgcaat tattaatctt 120
ttgtttcctc gtcattgttc tcgttcctt tcttccttgt ttctttttct gcacaatatt 180
tcaagctata ccaagcatatc aatcaactcc aagctt atg ccc aag aag 228
Met Pro Lys Lys
1

aagcggaagg tctcgagcgg cgccaat

255

<210> 265

<211> 4

<212> PRT

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<223> pDEST22 Promoter region

<400> 265

Met Pro Lys Lys
1

<210> 266

<211> 82

<212> DNA

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<223> pDEST22

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<221> CDS

<222> (28)..(66)

<223>

<400> 266

gaagataccc caccaaacc aaaaaaa gag ggt ggg tcg aat caa aca agt ttg 54
Glu Gly Gly Ser Asn Gln Thr Ser Leu
1 5

tac aaa aaa gct gaacgagaaa cgtaaa 82
Tyr Lys Lys Ala
10

<210> 267

<211> 13

<212> PRT

<213> Artificial Sequence

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<223> pDEST22

<400> 267

Glu	Gly	Gly	Ser	Asn	Gln	Thr	Ser	Leu	Tyr	Lys	Lys	Ala
1				5					10			

<210> 268

<211> 102

<212> DNA

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<223> pDEST23 T7 promoter

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aagtttgtac aaaaaagctg aacgagaaac gtaaaatgat at	102

<210> 269

<211> 153

<212> DNA

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<220>

<221> CDS

<222> (61)..(126)

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gct ttc ttg tac aaa gtg gtg att atg tcg tac tac cat cac cat cac	108

-330-

Ala Phe Leu Tyr Lys Val Val Ile Met Ser Tyr Tyr His His His His
1 5 10 15

cat cac ctc gat gag caa taactagcat aacccttgg ggcctct 153
His His Leu Asp Glu Gln
20

<210> 270

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> pDEST23 T7 promoter

<400> 270

Ala Phe Leu Tyr Lys Val Val Ile Met Ser Tyr Tyr His His His His
1 5 10 15

His His Leu Asp Glu Gln
20

<210> 271

<211> 102

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST24 T7 promoter

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cctctagatc acaagtttgt acaaaaaagc tgaacgagaa ac 102

<210> 272

<211> 102

<212> DNA

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<220>

<223> pDEST24 T7 promoter

<220>

<221> CDS

<222> (22)..(60)

<223>

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                        Ala Phe Leu Tyr Lys Val Val Ile Met Ser
                        1          5          10

cct ata cta gggtattgga aaattaaggg ccttggtgcaa ccactcgac tt      102
Pro Ile Leu
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<210> 273

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> pDEST24 T7 promoter

<400> 273

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Ala Phe Leu Tyr Lys Val Val Ile Met Ser Pro Ile Leu
1          5          10
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<210> 274

<211> 102

<212> DNA

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<223> pDEST25 T7 promoter

<220>

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<222> (1)..(1)

<223> May be any nucleotide

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ctagatcaca agtttgtaca aaaaagctga acgagaaaacg ta 102

<210> 275

<211> 102

<212> DNA

<213> Artificial Sequence

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<223> pDEST25 T7 promoter

<220>

<221> CDS

<222> (19)..(60)

<223>

<400> 275
ttttacgttt ctcgttca gct ttc ttg tac aaa gtg gtg att atg agc gat 51
Ala Phe Leu Tyr Lys Val Val Ile Met Ser Asp
1 5 10
aaa att att cacctgactg acgacagttt tgacacggat gtactcaaag cg 102
Lys Ile Ile

<210> 276

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> pDEST25 T7 promoter

<400> 276

Ala Phe Leu Tyr Lys Val Val Ile Met Ser Asp Lys Ile Ile
1 5 10

<210> 277

<211> 306

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST26 CMV promoter

<220>

<221> CDS

<222> (238)..(297)

<223>

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acaactccgc cccattgacg caaatgggcg gtaggcgtgt acggtgggag gtctatataa 120
gcagagctcg tttagtgaac cgtcagatcg cctggagacg ccatccacgc tgttttgacc 180
tccatagaag acaccgggac cgatccagcc tccggactct agcctaggcc gcggacc 237
atg gcg tac tac cat cac cat cac cat cac tct aga tca aca agt ttg 285
Met Ala Tyr Tyr His His His His His His Ser Arg Ser Thr Ser Leu
1 5 10 15
tac aaa aaa gct gaacgagaa 306
Tyr Lys Lys Ala
20

<210> 278

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> pDEST26 CMV promoter

<400> 278

Met Ala Tyr Tyr His His His His His His Ser Arg Ser Thr Ser Leu
1 5 10 15

Tyr Lys Lys Ala
20

<210> 279

<211> 255

<212> DNA

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<223> pDEST27 promoter

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<222> (1)..(1)

<223> May be any nucleotide

<220>

<221> CDS

<222> (139)..(153)

<223>

<400> 279
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gccatccacg ctgttttgac ctccatagaa gacaccggga ccgatccagc ctccggactc 120

tagcctaggc cgcggacc atg gcc cct ata cta ggttattgga aaattaaggg 173
Met Ala Pro Ile Leu
1 5

ccttgtgcaa cccactcgac ttcttttgga atatcttgaa gaaaaatatg aagagcattt 233

gtatgagcgc gatgaaggtg at 255

<210> 280

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> pDEST27 promoter

<220>

<221> misc_feature

<222> (1)..(1)

<223> May be any nucleotide

<400> 280

Met Ala Pro Ile Leu
1 5

<210> 281

<211> 87

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<220>

<221> CDS

<222> (37)..(75)

<223>

<400> 281
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Val Pro Arg Ser Arg Ser
1 5

aca agt ttg tac aaa aaa gct gaacgagaaa cg 87
Thr Ser Leu Tyr Lys Lys Ala
10

<210> 282

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> pDEST27 promoter

<400> 282

Val	Pro	Arg	Ser	Arg	Ser	Thr	Ser	Leu	Tyr	Lys	Lys	Ala
1				5					10			

<210> 283

<211> 405

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acaatttcac acaggaaaca gctatgacca ttaggcctat ttaggtgaca ctatagaaca	180
agtttgtaca aaaaagcagg ctggtaccgg tccggaattc ccgggatatc gtcgacgagc	240
tcactagtcg gcggccgctc tagagtatcc ctcgaggggc ccaagcttac gcgtaccag	300
ctttcttgta caaagtggtc cctatagtga gtcgtattat aagctaggca ctggccgctc	360
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<210> 284

<211> 153

<212> DNA

<213> Artificial Sequence

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<223> His6-CAT

<220>

<221> CDS

<222> (31)..(153)

<223>

<400> 284

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			Met	Ser	Tyr	Tyr	His	His	His	His						
			1				5									
cat	cac	ggc	atc	aca	agt	ttg	tac	aaa	aaa	gca	ggc	ttt	gaa	aac	ctg	102
His	His	Gly	Ile	Thr	Ser	Leu	Tyr	Lys	Lys	Ala	Gly	Phe	Glu	Asn	Leu	
		10				15					20					
tat	ttt	caa	gga	acc	atg	gag	aaa	aaa	atc	act	gga	tat	acc	acc	gtt	150
Tyr	Phe	Gln	Gly	Thr	Met	Glu	Lys	Lys	Ile	Thr	Gly	Tyr	Thr	Thr	Val	
25					30					35					40	
gat																153
Asp																

<210> 285

<211> 41

<212> PRT

<213> Artificial Sequence

<220>

<223> His6-CAT

<400> 285

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1				5					10					15	
Lys	Lys	Ala	Gly	Phe	Glu	Asn	Leu	Tyr	Phe	Gln	Gly	Thr	Met	Glu	Lys
			20					25					30		
Lys	Ile	Thr	Gly	Tyr	Thr	Thr	Val	Asp							
			35				40								